BRUHATH BANGALORE MAHANAGARA PALIKE

YELAHANKA ZONE ELECTRICAL DIVISION

Name of the work : Providing illumination in REVA College Junction,Bellahalli Junction Hegadenagara Main Road, Bharati City Junction, Agrahara Junction of Hegadenagara Main Road in Chikkajala Traffic police limit Ward No 05.

Est Cost 1650000.00

Sl. No	SR Page No	Description	Unit	Qty	Rate	Amount
1	14/4.5.2	Fabrication, Supplying, Erection, Testing and Commissioning of .....Mtrs long polygon high mast with Single / Multiple telescopic sections having, (minimum overlap distance of 1.5 times of top section) thickness as per BSEN 10025 grade S 355 JO /ASTM A572-50 steel sheet plate for shaft suitable to withstand a wind velocity of 47 m/sec as per IS 875 part 3(as per GA Drawing).Base plate as per IS 2062/ASTM A572-50. The mast shall be Galvanized in single Hot-dip as per BSEN ISO 1461/ASTM A123 with an average 70 microns as per IS 2629, and welded as per BS 5135 Single L-Seam joint. The mast shall have 2way head frame with die cast LM-6 pulleys, stainless steel axle, Phosphorus Bronze bearing bush press-fitted with separate guides for 2 runs of 5mm dia, stainless steel wire rope of AISI 304grade 7/19 core, (Factor of Safety as per TR no-7). 2.5sqmm EPR insulated PCP sheathed trailing power cable housed inside the bottom shaft of mast with door having locking arrangement. The mast shall have manual / power tool (Suitable reversible geared motor operating on 230/ 415V, 50Hz, shall be provide above 15 Mtrs mast) The mast shall have lantern of 2 segments, suitable dia with max load carrying capacity as per IS 1239. The mast shall be erected on existing RCC footing. The mast shall be supplied with 3mm thick template, lightning arrester of 1.2m length galvanized pipe with top arrow fitted on top of the head frame cover and GLS type aviation twin lamps fitting with wiring complete. (excluding foundation) as per technical data.**16 Mtrs - Top 150mm and bottom 410 mm dia**	Set	2	140800.00	281600.00
2	14/4.5.2	Fabrication, Supplying, Erection, Testing and Commissioning of .....Mtrs long polygon high mast with Single / Multiple telescopic sections having, (minimum overlap distance of 1.5 times of top section) thickness as per BSEN 10025 grade S 355 JO /ASTM A572-50 steel sheet plate for shaft suitable to withstand a wind velocity of 47 m/sec as per IS 875 part 3(as per GA Drawing).Base plate as per IS 2062/ASTM A572-50. The mast shall be Galvanized in single Hot-dip as per BSEN ISO 1461/ASTM A123 with an average 70 microns as per IS 2629, and welded as per BS 5135 Single L-Seam joint. The mast shall have 2way head frame with die cast LM-6 pulleys, stainless steel axle, Phosphorus Bronze bearing bush press-fitted with separate guides for 2 runs of 5mm dia, stainless steel wire rope of AISI 304grade 7/19 core, (Factor of Safety as per TR no-7). 2.5sqmm EPR insulated PCP sheathed trailing power cable housed inside the bottom shaft of mast with door having locking arrangement. The mast shall have manual / power tool (Suitable reversible geared motor operating on 230/ 415V, 50Hz, shall be provide above 15 Mtrs mast) The mast shall have lantern of 2 segments, suitable dia with max load carrying capacity as per IS 1239. The mast shall be erected on existing RCC footing. The mast shall be supplied with 3mm thick template, lightning arrester of 1.2m length galvanized pipe with top arrow fitted on top of the head frame cover and GLS type aviation twin lamps fitting with wiring complete. (excluding foundation) as per technical data.**12Mtrs/12.5Mtrs - Top 100mm and bottom 310 mm dia**	Set	2	105600.00	211200.00

3	67/12.9/6	Supply of LED floodlight luminaire with pressure die cast aluminium housing body for optimal thermal dissipation. Lamp compartment comprising of anti glare clear diffuser with Injection moulded polycarbonate/clear glass material, delivering superior light output. Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%, CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminaire > IK08. Power Factor >0.9 with mains, Surge Protection- Min 5KV along with Over voltage/ Overload, short circuit/ miss-wiring protection. Compatible for pole mouting with outer dia of 40mm to 50mm.				0.00
		Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Compliance to IS 10322/ IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools. LED Light fixture with W System Power consumption. LED Efficiency>130lm/w, nominal CRI >75. Luminaire manufacturer should have in- house facility accredited by NABL/CPRI & any Government certified agency & Design & Development facility certified by ISO 9001:2008 . Housing with supplier word mark /name shall be Engraved / Embossing on the die cast housing/ Body part. Warranty of 2 Years against any manufacturing defect working under standard electrical conditions as mentioned above should be given by LED manufacturer & Cree/Nichia/ Lumileds/Osram make LED Source.LED Floodlight 240W	Nos	24	18400.00	441600.00
4	67/12.8.5	Supply of LED Streetlight luminaire with pressure die cast aluminium housing body for optimal thermal dissipation. Lamp compartment comprising of anti glare clear diffuser with Injection moulded polycarbonate material, delivering superior light output. Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%, maximum light intensity should be between 60 degrees to 70 degrees. CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminaire > IK08. Power Factor >0.9 with mains, Surge Protection- Min 5KV along with Over voltage/ Overload, short circuit/ miss-wiring protection. Compatible for pole mouting with outer dia of 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Compliance to IS 10322/IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools. LED Light fixture with W System Power consumption. LED Efficiency>130lm/w, nominal CRI >75.	Nos	0	9200.00	0.00
5	14.5	Fixing halogen/metal halide / SVL / IL / LED floodlight fitting over existing pole / wall ceiling including clamps, bolts, nuts and wiring using suitable capacity wires.	Each	24	175.00	4200.00
6	40/6.4.5	Supplying of 1.1 KV LT UG cable XLPE or Heat resistant PVC insulated, PVC extruded Inner sheath armoured UG LT cable as per IS-1554 (Part-1) or IS-7098 Part-1, Armouring strip thickness in average +5% and resistivity 14 Ohms/Kms (Max) as per IS-3975 5) 3.5 core 25 sqmm	Mtr	300	180.00	54000.00
7	41/6.5	Labour charges for laying of 1.1 KV class UG cable in existing trench GI pipe / stoneware pipe / on wall / on pole as required. 7) 25 sqmm to 75 sqmm	Rmt	300	35.00	10500.00

8	41/ 6.6	Digging of trench of 0.6m deep x 0.50 mtr wide refilling the trench to the required ground level and consolidating etc., complete.(As per Civil SR KSRB I-2, P-7) 2) In soil (Hard)	Mtrs	150	102.00	15300.00
9	30/ 5.41	Supplying and fixing angle iron frame work fabricated out of M.S. angle iron.. and M.S. flat ... with bolts, washers etc., and painted with 2 coats of red oxide and then two coats of approved paint. 2) 50x50x6mm	Per Mtr	32	330.00	10560.00
10	26/5.14	Supplying and fixing Moulded Case Circuit Breaker (MCCB) over the existing wood/panel board using necessary screws, bolts, nuts and wiring complete. Protection of Overload and Short circuit with thermal Magnetic/Micro processor release and Earth Fault as per IS-13947. (Icu = Ics) THREE POLE, 1) 100Amps 25kA.	Each	4	4530.00	18120.00
11	24/ 5.41	Supplying & fixing of Porcelain fuse channel with cut out on existing wooden/panel using necessary nuts, bolts and washers. 4) 100Amps	Per Mtr	8	349.00	2792.00
12	30/5.42	Fabricating supplying and mounting MS box made out ... SWG suitable for floor / wall mounting, fully weather proof with provision for better heat dissipation, provided with hinged front cover, equipped with tamper proof locking arrangements, with suitable size clamps with necessary cable entry pipe with gland and box should be finished with 7tanks treatment with powder coated paint and finally finished with approved colour etc., complete. 1) 14SWG	Mtr	140000	0.40	56000.00
13	10/3.9	Supplying and fixing hylum plastic sheet 3mm thick with necessary nitches for fixing switches, regulators etc., and fixing on existing wood or metal box using N.F. screws.	Sqcm	30000	0.24	7200.00
14	5/2.3.2	Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand copper wire with low conductor resistance single core in open or concealed system of wiring with specified IS-694:confirming to latest amendments.10. sqmm	Mtrs	30	115.00	3450.00
15	40/6.1	Supplying, fixing, wiring, earth electrode for grounding conduits, I.C. cutouts and other equipment's on the meter board using 40mm dia 2.90mm thick GI pipe 2.5 mtr long buried in a pit ... The pit should be filled with equal proportion of salt and charcoal 150mm all-round the pipe to complete depth. The connection from the pipe to the conduit etc., is to be established through GI wire of size as per ISI specification 7.3.3. of IS 732 using 12mm dia bolts, nuts, washers and check nuts etc., the pipe shall have 16 through holes of 12 mm dia	No	4	2999.70	11998.80
16	41/6.3	Supplying and running of GI/Copper strips for grounding connections, using necessary fixing materials as required.25x3mm GI strip	Mtrs	20	75.00	1500.00
17	41/6.9.1	Supplying and fixing of class A (medium duty) GI pipe of wall thickness not less than 3.25mm on pole/wall/drain crossing with necessary clamping arrangements for UG cable of 1.1 KV.40mm	Mtrs	15	335.00	5025.00

18	42/6.10.3	Supplying and fixing L.T. cast Iron pot heads suitable for 1.1 KV class UG cable filled with necessary bitumen/insulating compound complete with terminals, clamps, bolts, nuts and washers etc.25Sqmm	Nos	4	350.00	1400.00
19	2019-20 PWD Sr	Providing RCC Foundation for 12 Mtrs Mini high mast Datarate As per The Drawing and Civil estimate enclosed	Nos	4	29402.00	117608.00
		Total Rs				1254053.80
20	Ar	Thiristor based single/ Three phase smart street light control and monitoring system Remotely control and and monitorable smart street light system by using web or mobile application .smart control system has hardware ruggedness over field issues like line cross, line short, lighting and any other irregularities in voltage. It has some features like 1.Remote lighting management.2.Precise lighting turnoff.3.Load ballancing.4.Load power regulation.5.Status tracking. It works on the basis of some of these features 1) Main Control Unit (Mother board) : Handles controlling , data handling and other communication process. 2) Communication unit: GSM/GPRS quad bandwith RS232 interface wireless communication unit 3) Gate Driver Unit: Firing angle controllable board for driving the thyristor 4) Switching Thyristor: SCR 110 AMPS dual thyristor modules for switching 5) Embedded Firmware: Firmware to control , handle , process the data and communicate it wirelessly.6) Metal Enclosure : IP66 weather prof metal enclosure.7)	Nos	4	51500.00	206000.00
21	13/39.02	Laying of UG Cables by trenchless technology by adopting horizontal boring & Drawing of cable including preparation at site With HDPE Pipe i) Normal soil 5/6" bore size		28	848.00	23744.00
		Total Rs				**1483797.80**
		GST 12 % on Item No 1 to 18 Rs		1254053.80		150486.46
		Bescom and Misscelleneous charges				15715.74
		TOTAL				**1650000.00**

Administrative Sanction for Rs. 16,50,000:00
Rupees Sixteen Lakh Fifty Thousand only
is accorded under no. P0300 M and R to Street Lights - Repla cement of Burnt bulb etc (package)
Registered as EE No. 05/2021-22 Subject to conditions contained in enclosed memo No. BBMP/EE/ELC/42/AS/05/21-22 Dt 17.07.2021
Executive Engineer

CERTIFICATE

1. The place was inspected and work is essential
2. The place comes under BBMP limits.
3. The estimated prepared based on the PWD Electrical 2019-20 Rates and Bescom 2018-19

Asst. Engineer (Elec)

Asst. Exe.Engineer (Elec)
Sub-Division No.
Bruhat Bangalore Mahanagara Palike

TECHNICALLY SANCTIONED FOR Rs. 16,50,000:00
Rupees Rupees Sixteen Lakh Fifty Thousand only
P0300 M and R to Street Lights Replacement (Package)
Registered as EE ( ) No. 02/2021-22
Subject to conditions contained in enclosed memo EE ( ) No. BBMP/EE/ELC/42/AS/05/21-22
Dt. 17-07-2021 Estimate A/ Sanctioned
No. BBMP/EE/ELC/42/TS/02/21-22
Dated 20.07.2021 Rs. 16,50,000:00

EXECUTIVE ENGINEER (ELEC)
YELAHANKA DIVISION
BRUHAT BANGALORE MAHANAGARA PALIKE